

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
9 June 2005 (09.06.2005)

PCT

(10) International Publication Number
WO 2005/052149 A1

(51) International Patent Classification⁷: **C12N 9/48**,
15/52, 15/63, C07K 16/18, A61K 38/16, C30B 7/00

Scheelevagen 19A, SE-223 70 Lund (SE). **FUREBRING, Christina** [SE/SE]; Alligator Bioscience AB, Scheelevagen, S-SE-223 70 Lund (SE).

(21) International Application Number:
PCT/GB2004/004731

(22) International Filing Date:
10 November 2004 (10.11.2004)

(25) Filing Language: English

(26) Publication Language: English

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(30) Priority Data:
0326676.4 15 November 2003 (15.11.2003) GB

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant (*for all designated States except MG, US*): **ASTRAZENECA AB** [SE/SE]; SE-151 85 Sodertalje (SE).

(71) Applicant (*for MG only*): **ASTRAZENECA UK LIMITED** [GB/GB]; 15 Stanhope Gate, London Greater London W1K 1LN (GB).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **CRONET, Philippe** [BE/SE]; AstraZeneca R & D Molndal, SE-431 83 Molndal (SE). **KNECHT, Wolfgang** [DE/SE]; AstraZeneca R & D Molndal, SE-431 83 Molndal (SE). **MALMBORG HAGER, Cecilia Ann-Christin** [SE/SE]; Alligator Bioscience AB, Scheelevagen 19A, SE-223 70 Lund (SE). **ANDERSSON, Mats** [SE/SE]; Alligator Bioscience AB,

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **CARBOXYPERTIDASE U (CPU) MUTANTS**

(57) Abstract: This invention relates to mutant forms of carboxypeptidase U with increased thermal stability relative to wild-type. In addition to the individual thermal stabilising mutations identified (at positions 166, 204, 219, 230, 251, 315), the inventors have identified a region (S327 - H357) that is crucial to the stability of CPU. The invention relates to nucleic acid encoding such mutant forms and the polypeptides encoded thereby. The invention also relates to methods and materials for making CPU mutants with increased thermal stability relative to wild-type and their use, for example to produce crystals of CPU or proCPU for 3-dimensional structure determination, or in therapy.



WO 2005/052149 A1